USER'S MANUAL

BPC-8580

All-in-One Book-size PC
For Socket 478 System

BPC-8580 M6

BPC-8580 All-in-One Book-size PC

OPERATION MANUAL

COPYRIGHT NOTICE

This operation manual is meant to assist users in installing and setting up the system. The information contained in this document is subject to change without prior any notice.

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CE NOTICE

This is a class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void your authority to operate such equipment.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Installation only by a trained electrician or only by an electrically trained person who knows all English Installation and Device Specifications which are to be applied.

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INTRODUCTION

CHAPTER

1

This chapter gives you the information for BPC-8580. It also outlines the System specification.

Section includes:

- About This Manual
- System Specifications
- Safety precautions

Experienced users can skip to chapter 2 on page 2-1 for Quick Start.

1-1. ABOUT THIS MANUAL

Thank you for purchasing our BPC-8580 Pentium M Book-size PC enhanced with VGA / Sound / LAN, which is fully PC / AT compatible. BPC-8580 provides faster processing speed, greater expandability and can handle more task than before. This manual is designed to assist you how to install and set up the system. It contains four chapters. The user can apply this manual for configuration according to the following chapters :

Chapter 1 Introduction

This chapter introduces you to the background of this manual, illustration of the case, and the specifications for this system. The final page of this chapter indicates some safety reminders on how to take care of your system.

Chapter 2 Hardware Configuration

This chapter outlines the component location and their functions. In the end of this chapter, you will learn how to set jumper and how to configure this card to meet your own needs.

Chapter 3 Software Utilities

This chapter contains helpful information for proper installations of the VGA utility, LAN utility, sound utility, and BIOS update. It also describes the Watchdog timer configuration.

Chapter 4 Award BIOS Setup

This chapter indicates you how to set up the BIOS configurations.

Appendix A System Assembly

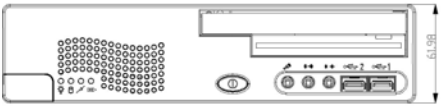
This appendix contain exploded diagram of the system

Appendix B Technical Summary

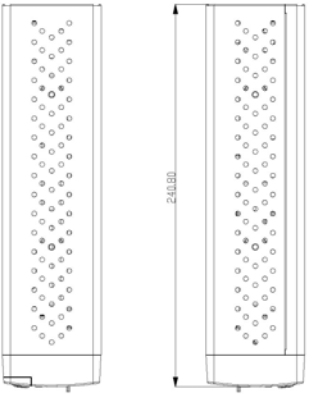
This section gives you the information about the Technical maps.

1-2. CASE ILLUSTRATION

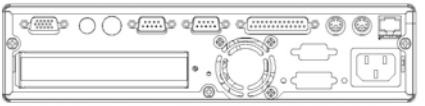
Front View



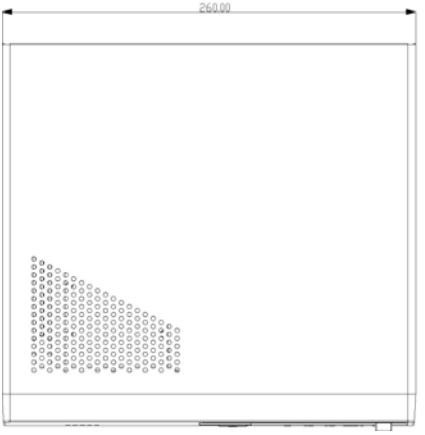
Side View



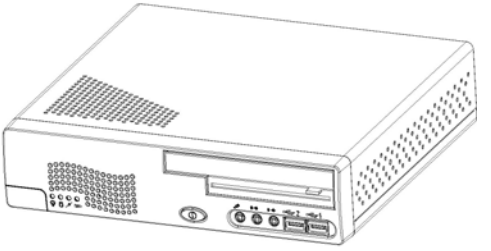
Rear View



Top View



Quarter View



1-3. SYSTEM SPECIFICATION

- **CPU (mPGA 478) :**
  Pentium-M, 478-pin socket on board（Pentium-M CPU ：up to 2.0GHz ）
  Auto detect voltage regulator

- **SYSTEM CHIPSET :**
  Intel® 855GME + ICH4

- **MEMORY :**
  Up to 2G DDR RAM
  2 pieces x DDR DIMM Socket

- **CACHE :**
  Built-in CPU(512K/1M/2M Cache)

- **REAL-TIME CLOCK / CALENDAR :**
  ICH4 -South Bridge

- **BIOS :**
  Phoenix-Award Flash BIOS for plug & play function
  Memory size with 4MB and with VGA BIOS

- **KEYBOARD CONNECTOR :**
  Mini DIN connector
  Supports PC/AT Keyboard

- **MOUSE CONNECTOR :**
  Mini DIN connector
  Supports PS/2 Mouse.

- **BUS SUPPORT :**
  Riser Card:
  1 x PCI Slot or 1 x AGP slot

- **DISPLAY :**
  Built-in Intel® 855GME, Support VGA monitor.

- **IDE INTERFACE :**
  Two IDE port support up to two IDE device
  Support Ultra DMA 33

- **FLOPPY DISK DRIVER INTERFACE :**
  One 26-pin connector on board
  Support for slim Floppy Disk Drive

- **SERIAL PORT :**
  Four high speed 16550 Compatible UARTs with Send / Receive 16 Byte FIFOs.
  COM1 (D-Sub Connector) for RS-232;
  COM2 (D-Sub Connector) for RS-232/422/485;
  COM3 (2 x 5 2.0mm Header) for RS-232 (Optional)
  COM4 (2 x 5 2.0mm Header) for RS-232. (Optional)
  All with 5v/12v power capability. (Optional)

- **PARALLEL PORT :**
  One 25-pin D-Sub connector on rear panel.
  Support for SPP, ECP, EPP Function.
  Bi-directional parallel port

- **LAN INTERFACE :**
  Intel® 82562ET Chip
  RJ-45 jack onboard, Support for 10/100 Base-T Ethernet
  Support Wake-On-LAN function

- **UNIVERSAL SERIAL BUS :**
  2 x USB ports on front panel. All USB ports support USB 2.0 standard

- **SOUND INTERFACE :**
  Realtek AC '97 Codec, ALC202A. The signal of LINE-OUT connector on Rear Panel (Another 4-pin pin-header onboard for CD-ROM audio line-out connecter.)
  Interface: Line Out, Line_In, MIC

- **HARDWARE MONITORING FUNCTION :**
  Monitor CPU Voltage, CPU Temperature

- **LED INDICATOR :**
  4x LED indicators (Power, HDD, LAN-on and LAN-working)

GENERAL INFORMATION

- **POWER SUPPLY :**
  AC 115V ~230V, 47~63Hz input, ATX 110W (Built-in)

- **DRIVE BAYS (Optional) :**
  1x 2.5" HDD
  1x Slim CD-ROM
  1x Slim FDD

- **CONSTRUCTION :**
  Eelectroplate
  Galvanized steel chassis / painting

- **DIMENSIONS :**
  260mm x 62mm x 240mm (W x H x D)

- **NET WEIGHT :**
  3.3 (kg) or 7.26 (lb)

1-4. SAFETY PRECAUTIONS

Following messages are safety reminders on how to protect your systems from damages. And thus, helps you lengthen the life cycle of the system.

1. Check the Line Voltage

a. The operating voltage for the power supply should cover the range of 115VAC-230VAC, otherwise the system may be damaged.

2. Environmental Conditions

a. Place your BPC-8580 on a sturdy, level surface. Be sure to allow enough room on each side to have easy access.

b. Avoid extremely hot or cold places to install your BPC-8580 Book-sized PC.

c. Avoid exposure to sunlight for a long period of time (for example in a closed car in summer time. Also avoid the system from any heating device.). Or do not use BPC-8580 when it's been left outdoors in a cold winter day.

d. Bear in mind that the operating ambient temperature is from 0°C up to +40°C (32°F~104°F).

e. Avoid moving the system rapidly from a hot place to a cold place or vice versa because condensation may come from inside of the system.

f. Place BPC-8580 against strong vibrations, which may cause hard disk failure.

g. Do not place the system too close to any radio active device. Radio-active device may cause interference.

3. Handling

a. Avoid putting heavy objects on top of the system.

b. Do not turn the system upside down. This may cause the floppy drive and hard drive to mal-function.

c. Do not remove the diskette from the Floppy drive while the light is still on. If you remove the diskette while the light is on, you may damage the information on the diskette.

d. Do not allow foreign objects to fall into this product.

e. If water or other liquid spills into this product, unplug the power cord immediately.

4. Good Care

a. When the outside of the case is stained, remove the stain with neutral washing agent with a dry cloth.

b. Never use strong agents such as benzene and thinner to clean the system.

c. If heavy stains are present, moisten a cloth with diluted neutral washing agent or with alcohol and then wipe thoroughly with a dry cloth.

d. If dust has been accumulated on the outside, remove it by using a special made vacuum cleaner for computers.

HARDWARE CONFIGURATION

CHAPTER

2

*** QUICK START ***

Helpful information describes the jumper & connector settings, and component locations.

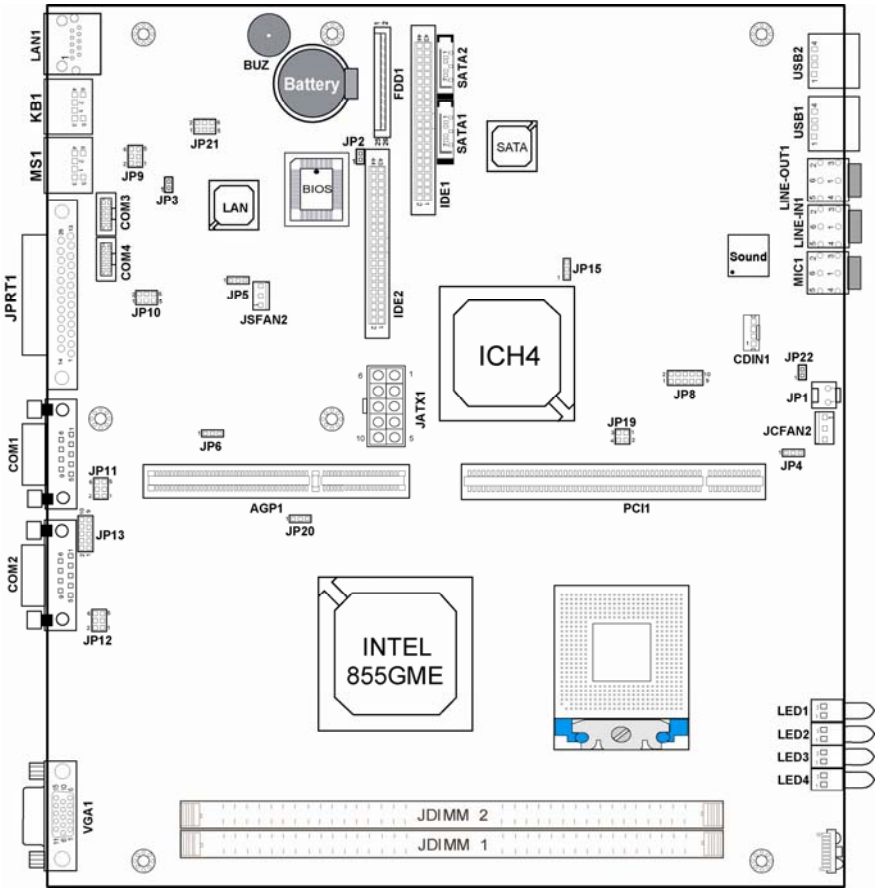
Section includes:

- Jumper & Connector Quick Reference Table
- Component Locations
- Configuration and Jumper settings
- Connector's Pin Assignments

2-1. JUMPER & CONNECTOR QUICK REFERENCE TABLE

COM Port Connector	COM1, COM2 COM3, COM4
COM2 or IrDA Selection	JP21
RS232/422/485 (COM2) Selection	JP13
COM1RI/Voltage Selection	JP11
COM2RI/Voltage Selection	JP12
COM3RI/Voltage Selection	JP9
COM4RI/Voltage Selection	JP10
Keyboard Connector	KB1
Mouse Connector	MS1
Power Button	JP1
Power LED Indicator	LED4
Hark Disk Drive LED Indicator	LED3
LAN LED Indicator	LED1, LED2
Clear CMOS Data Selection	JP15
CPU Fan Connector	JCFAN2
System Fan Connector	JSFAN2
CD-IN Connector	CDIN1
Hard Disk Drive Connector	IDE1, IDE2
VGA Connector	VGA1
Serial ATA Connector	SATA1, SATA2
Floppy Disk Drive Connector	FDD1
Printer Connector	JPRT1
Universal Serial Bus Connector	USB1, USB2
Reset/ NMI/ Clear Watchdog Selection	JP8
LAN Connector	LAN1
ATX Power Connector	JATX1
Microphone Connector	MIC1
Line-Out Connector	LINE-OUT1
Line-In Connector	LINE-IN1
AGP/ ADD Card Selection	JP20
CPU FAN Voltage Selection	JP4
System FAN Voltage Selection	JP5
AT/ ATX Power Selection	JP6
Reset Switch Connector	JP3
PCI Slot 3.3V Voltage Selection	JP19
Reserved Pin	JP2
Power Fail Selection	JP22

2-2. COMPONENT LOCATIONS



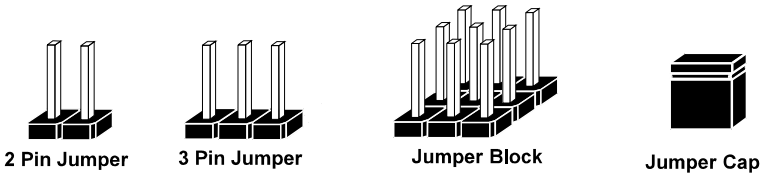
BPC-8580 Connector, Jumper and Component locations

2-3. HOW TO SET THE JUMPERS

You can configure your board by setting jumpers. Jumper is consists of two or three metal pins with a plastic base mounted on the card, and by using a small plastic "cap", Also known as the jumper cap (with a metal contact inside), you are able to connect the pins. So you can set-up your hardware configuration by "open" or "close" pins.

The jumper can be combined into sets that called jumper blocks. When the jumpers are all in the block, you have to put them together to set up the hardware configuration. The figure below shows how this looks like.

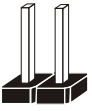
JUMPERS AND CAPS



If a jumper has three pins (for examples, labelled PIN1, PIN2, and PIN3), You can connect PIN1 & PIN2 to create one setting and shorting. You can either connect PIN2 & PIN3 to create another setting. The same jumper diagrams are applied all through this manual. The figure below shows what the manual diagrams look and what they represent.

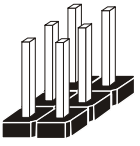
JUMPER DIAGRAMS

Jumper Cap looks like this

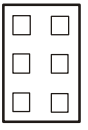


2 pin Jumper looks like this

3 pin Jumper looks like this

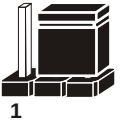


Jumper Block looks like this



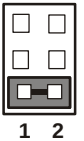
JUMPER SETTINGS

2 pin Jumper close(enabled) Looks like this



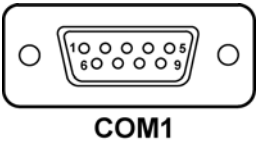
3 pin Jumper 2-3 pin close(enabled) Looks like this

Jumper Block 1-2 pin close(enabled) Looks like this



2-4. COM PORT CONNECTOR

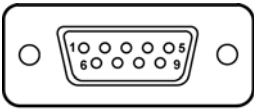
COM1 : COM1 Connector
COM1 is fixed as RS-232.
The pin assignment is as follows :



COM1

PIN	ASSIGNMENT
1	DCD1
2	RX1
3	TX1
4	DTR1
5	GND
6	DSR1
7	RTS1
8	CTS1
9	RI1

COM2 : COM2 Connector
The COM2 is selectable as RS-232/422/485.
The pin assignment is as follows :

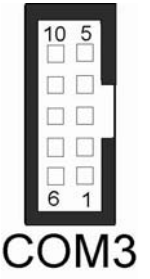


COM2

PIN	ASSIGNMENT		
	RS-232	**RS-422**	**RS-485**
1	DCD2	TX-	TX-
2	RX2	TX+	TX+
3	TX2	RX+	RX+
4	DTR2	RX-	RX-
5	GND	GND	GND
6	DSR2	RTS-	NC
7	RTS2	RTS+	NC
8	CTS2	CTS+	NC
9	RI2	CTS-	NC

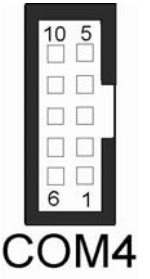
COM3 : COM3 Connector
COM3 is fixed as RS-232.
The pin assignment is as follows :

PIN	ASSIGNMENT
1	DCD3
2	RX3
3	TX3
4	DTR3
5	GND
6	DSR3
7	RTS3
8	CTS3
9	RI3
10	NC



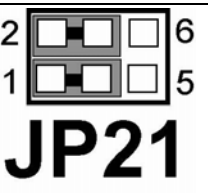
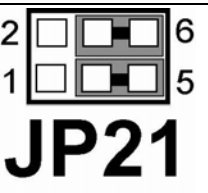
COM4 : COM4 Connector
COM4 is fixed as RS-232.
The pin assignment is as follows :

PIN	ASSIGNMENT
1	DCD4
2	RX4
3	TX4
4	DTR4
5	GND
6	DSR4
7	RTS4
8	CTS4
9	RI4
10	NC



2-5. COM2 OR IRDA SELECTION

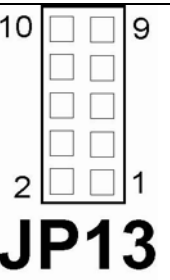
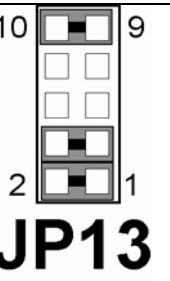
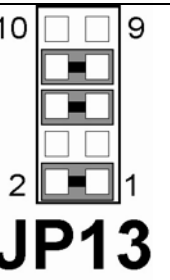
JP21 : COM2 or IrDA Selection
The selections are as follows:

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
COM2	1-3 2-4	
IrDA	3-5 4-6	

***Manufacturing Default –Normal.

2-6. RS232/422/485 (COM2) SELECTION

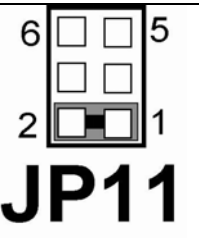
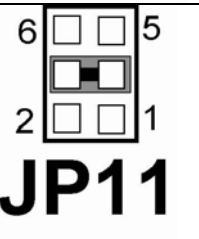
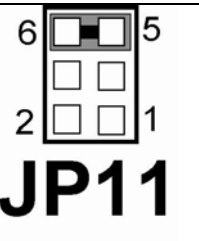
JP13 : RS-232/422/485 (COM2) Selection
This connector is used to set the COM2 function.
The jumper settings are as follows :

COM 2 Function	Jumper Settings (pin closed)	Jumper Illustrations
RS-232	All Open	
RS-422	1-2, 3-4, 9-10	
RS-485	1-2, 5-6, 7-8	

*** Manufacturing default --- RS-232.

2-7. COM1 RI/VOLTAGE SELECTION (OPTIONAL)

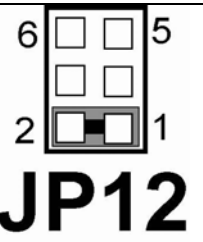
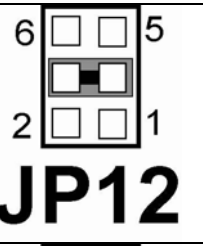
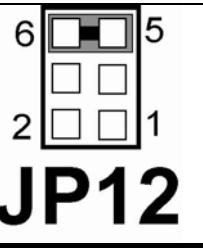
JP11 : COM1 RI/Voltage Selection
The selections are as follows :

Function	Jumper Settings (pin closed)	Jumper Illustrations
RI	1-2	
+12V	3-4	
+5V	5-6	

*** Manufacturing default --- RI.

2-8. COM2 RI/VOLTAGE SELECTION (OPTIONAL)

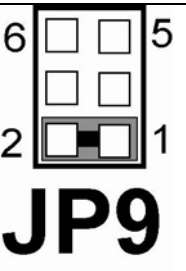
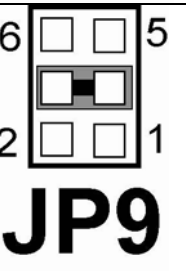
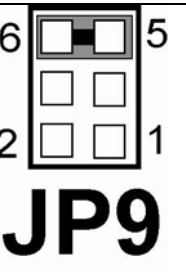
JP12 : COM2 RI/Voltage Selection
The selections are as follows :

Function	Jumper Settings (pin closed)	Jumper Illustrations
RI	1-2	
+12V	3-4	
+5V	5-6	

*** Manufacturing default --- RI.

2-9. COM3 RI/VOLTAGE SELECTION (OPTIONAL)

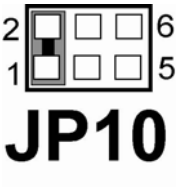
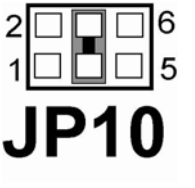
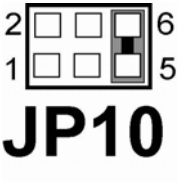
JP9 : COM3 RI/Voltage Selection
The selections are as follows :

Function	Jumper Settings (pin closed)	Jumper Illustrations
RI	1-2	
+12V	3-4	
+5V	5-6	

*** Manufacturing default --- RI.

2-10. COM4 RI/VOLTAGE SELECTION (OPTIONAL)

JP10 : COM4 RI/Voltage Selection
The selections are as follows :

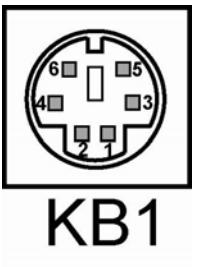
Function	Jumper Settings (pin closed)	Jumper Illustrations
RI	1-2	
+12V	3-4	
+5V	5-6	

*** Manufacturing default --- RI.

2-11. KEYBOARD CONNECTOR

KB1 : PC/AT Keyboard Connector
The pin assignments are as follows :

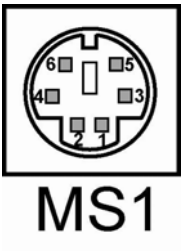
PIN	ASSIGNMENT
1	KB DATA
2	NC
3	GND
4	5VSB
5	KB CLK
6	NC



2-12. MOUSE CONNECTOR

MS1 : PS/2 Mouse Connector
The pin assignments are as follows :

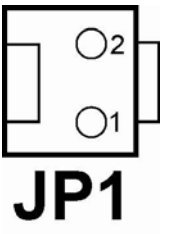
PIN	ASSIGNMENT
1	MS DATA
2	NC
3	GND
4	5VSB
5	MS CLK
6	NC



2-13. POWER BUTTON

JP1 : ATX Power Button.
The pin assignment is as follows :

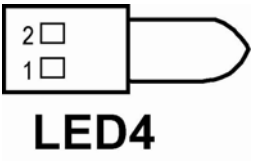
PIN	ASSIGNMENT
1	PANSWIN
2	GROUND



2-14. POWER LED INDICATOR

LED4 : Power LED Indicator
The pin assignment is as follows:

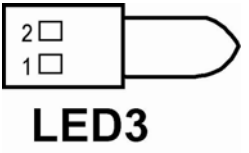
PIN	ASSIGNMENT
1	VCC
2	PWR LED



2-15. HARD DISK DRIVE LED INDICATOR

LED3 : Hard disk drive LED Indicator
The pin assignments are as follows :

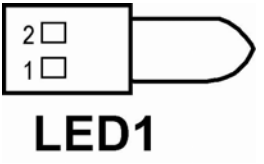
PIN	ASSIGNMENT
1	VCC
2	IDE LED



2-16. LAN LED INDICATOR

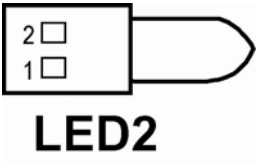
LED1 : LAN LED Indicator is Link
The pin assignments are as follows :

PIN	ASSIGNMENT
1	PULL HI
2	LED



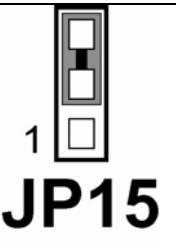
LED2 : LAN LED Indicator is Active
The pin assignments are as follows :

PIN	ASSIGNMENT
1	PULL HI
2	LED



2-17. CLEAR CMOS DATA SELECTION

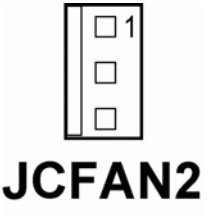
JP15 : Clear CMOS Data Selection
The selections are as follows :

FUNCTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
Normal	1-2	
Clear CMOS	2-3	

*** Manufacturing Default is set as Normal.

Note: To clear CMOS data, user must power-off the computer and set the jumper to “Clear CMOS” as illustrated above. After five to six seconds, set the jumper back to “Normal” and power-on the computer.

2-18. CPU FAN CONNECTOR



JCFAN2: CPU Fan Connector.
The pin assignments are as follows :

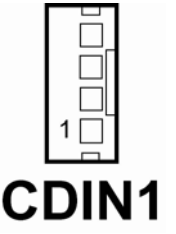
PIN	ASSIGNMENT
1	GROUND
2	+5V
3	FANIN

2-19. SYSTEM FAN CONNECTOR

JSFAN2: SYSTEM Fan Connector.
The pin assignments are as follows :

PIN	ASSIGNMENT
1	GROUND
2	+12V
3	FANIN

2-20. CD-IN CONNECTOR



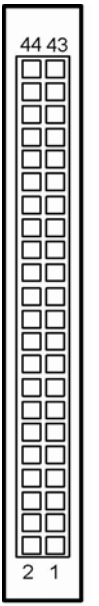
CDIN1: CD-IN Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	CD-IN LEFT
2	GROUND
3	CD-IN RIGHT
4	GROUND

2-21. HARD DISK DRIVE CONNECTOR

IDE1 : Hard Disk Drive Connector
The pin assignments are as follows:

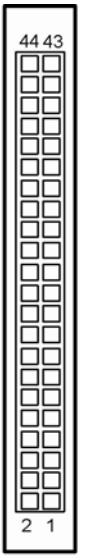
PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	IDERSTJ	2	GND
3	PDD7	4	PDD8
5	PDD6	6	PDD9
7	PDD5	8	PDD10
9	PDD4	10	PDD11
11	PDD3	12	PDD12
13	PDD2	14	PDD13
15	PDD1	16	PDD14
17	PDD0	18	PDD15
19	GND	20	NC
21	DDREQA	22	GND
23	DIOWAJ	24	GND
25	DIORAJ	26	GND
27	HDRDYA	28	PULL LOW
29	DDACKAJ	30	GND
31	IDE_IRQ14	32	NC
33	PDA1	34	PD_80P
35	PDA0	36	PDA2
37	PDCSJ1	38	PDCSJ3
39	HDLEDJ1	40	GND
41	5V	42	5V
43	GND	44	NC



IDE1

IDE2 : Hard Disk Drive Connector
The pin assignments are as follows:

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	IDERSTJ	2	GND
3	PDD7	4	PDD8
5	PDD6	6	PDD9
7	PDD5	8	PDD10
9	PDD4	10	PDD11
11	PDD3	12	PDD12
13	PDD2	14	PDD13
15	PDD1	16	PDD14
17	PDD0	18	PDD15
19	GND	20	NC
21	DDREQA	22	GND
23	DIOWAJ	24	GND
25	DIORAJ	26	GND
27	HDRDYA	28	PULL LOW
29	DDACKAJ	30	GND
31	IDE_IRQ14	32	NC
33	PDA1	34	PD_80P
35	PDA0	36	PDA2
37	PDCSJ1	38	PDCSJ3
39	HDLEDJ1	40	GND
41	5V	42	5V
43	GND	44	NC

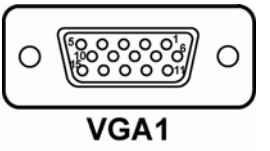


IDE2

2-22. VGA CONNECTOR

VGA1: VGA Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	RED
2	GREEN
3	BLUE
4	NC
5	GND
6	GND
7	GND
8	GND
9	NC
10	GND
11	NC
12	NC
13	HSYNC
14	VSYNC
15	NC

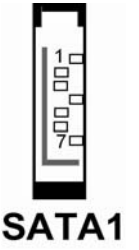


2-23. SERIAL ATA CONNECTOR

SATA1, SATA2: The BPC-8580 possesses two Serial ATA Connector. The pin assignments are as follows:

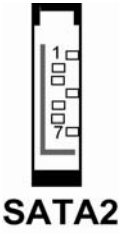
SATA1:

PIN	ASSIGNMENT
1	GND
2	SATAHDR_TXP0
3	SATAHDR_TXN0
4	GND
5	SATAHDR_RXN0
6	SATAHDR_RXP0
7	GND



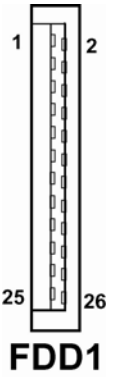
SATA2:

PIN	ASSIGNMENT
1	GND
2	SATAHDR_TXP1
3	SATAHDR_TXN1
4	GND
5	SATAHDR_RXN1
6	SATAHDR_RXP1
7	GND



2-24. FLOPPY DISK DRIVE CONNECTOR

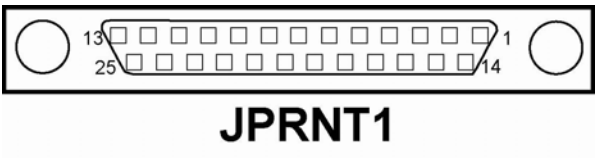
FDD1 : Floppy Disk Drive Connector
The pin assignments are as follows :



PIN	ASSIGNMENT	PIN	ASSIGNMENT
2	INDEXJ	1	5V
4	DRVAJ	3	5V
6	DSKCHGJ	5	5V
8	NC	7	NC
10	MOTEAJ	9	NC
12	FDIRJ	11	NC
14	STEPJ	13	DENSELJ
16	WDATAJ	15	NC
18	WGATEJ	17	GND
20	TK00J	19	GND
22	WPTJ	21	GND
24	RDATAJ	23	GND
26	SIDE1J	25	GND

2-25. PRINTER CONNECTOR

JPRT1: Printer Connector
As to link the Printer to the card, you need a cable to connect both DB25 connector and parallel port.
The pin assignments are as follows :

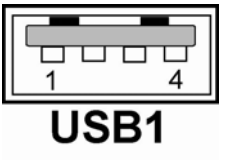


PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	STROBE	14	AFDJ
2	PPD0	15	ERRORJ
3	PPD1	16	INITJ
4	PPD2	17	SLINJ
5	PPD3	18	GND
6	PPD4	19	GND
7	PPD5	20	GND
8	PPD6	21	GND
9	PPD7	22	GND
10	ACKJ	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT		

2-26. UNIVERSAL SERIAL BUS CONNECTOR

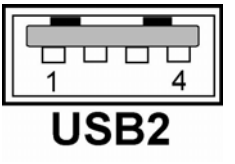
USB1: Universal Serial Bus Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	VCC
2	USBP0-
3	USBP0+
4	GND



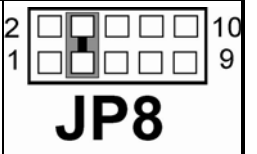
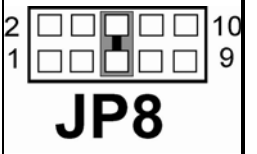
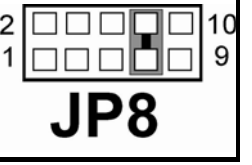
USB2: Universal Serial Bus Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	VCC
2	USBP0-
3	USBP0+
4	GND



2-27. RESET/NMI/CLEAR WATCHDOG SELECTION

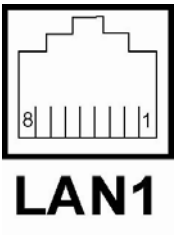
JP8: Reset/NMI/Clear Watchdog Selection
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
RESET	3-4	
NMI	5-6	
Clear Watchdog	7-8	

*** Manufacturing Default: NMI.

2-28. LAN CONNECTOR

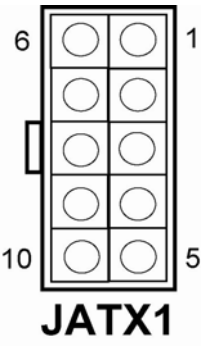
LAN1: LAN Connector.
The pin assignment is as follows :



PIN	ASSIGNMENT
1	MDI_0P
2	MDI_0N
3	MDI_1P
4	MDI_2P
5	MDI_2N
6	MDI_1N
7	MDI_3P
8	MDI_3N

2-29. ATX POWER CONNECTOR

JATX1 : ATX Power Connector
The pin assignments are as follows:

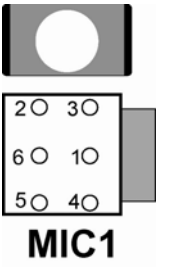


PIN	ASSIGNMENT
1	5V
2	5V
3	GND
4	GND
5	12V
6	5VSB
7	5V
8	GND
9	PS_ON
10	-12V

2-30. MICROPHONE CONNECTOR

MIC1 : Microphone Connector
The pin assignments are as follows :

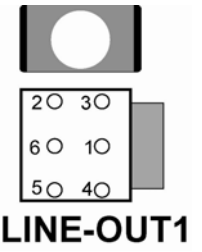
PIN	ASSIGNMENT
1	GND
2	MIC_VL
3	NC
4	NC
5	NC
6	NC



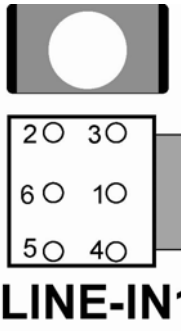
2-31. LINE-OUT CONNECTOR

LINE-OUT1 : Line-Out Connector
The pin assignments are as follows :

PIN	ASSIGNMENT
1	GND
2	AUDIO OUT LEFT
3	NC
4	NC
5	AUDIO OUT RIGHT
6	NC



2-32. LINE-IN CONNECTOR



LINE-IN1 : Line-In Connector
The pin assignments are as follows :

PIN	ASSIGNMENT
1	GND
2	AUDIO OUT LEFT
3	NC
4	NC
5	AUDIO OUT RIGHT
6	NC

2-33. AGP/ADD CARD SELECTION

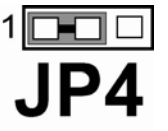
JP20: AGP/ Add Card Selection
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
AGP Card	1-2	
ADD Card	2-3	

*** Manufacturing Default: AGP Card

2-34. CPU FAN VOLTAGE SELECTION

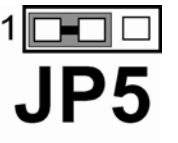
JP4 : CPU FAN Voltage Selection
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
+12V	1-2	
+5V	2-3	

*** Manufacturing Default: +5V.

2-35. SYSTEM FAN VOLTAGE SELECTION

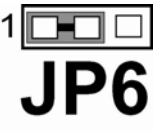
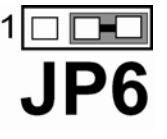
JP5 : System FAN Voltage Selection
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
+12V	1-2	
+5V	2-3	

*** Manufacturing Default: +12V.

2-36. AT/ATX POWER SELECTION

JP6 : AT/ ATX Power Selection
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
ATX	1-2	
AT	2-3	

*** Manufacturing Default: ATX.
if set to AT, please disable ACPI under BIOS

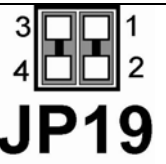
2-37. RESET SWITCH CONNECTOR

JP3 : Reset Switch Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	Reset_Switch
2	GND

2-38. PCI SLOT 3.3V VOLTAGE SELECTION

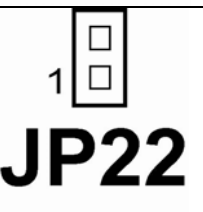
JP19 : PCI Slot 3.3V Voltage Selection.
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
3.3V from Mainboard	1-2 3-4	

. *** Manufacturing Default: 3.3V from Mainboard.

2-39. POWER FAIL SELECTION

JP22: Power Fail Selection.
The selections are as follows:

SELECTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
On	Closed	
Off	open	

. *** Manufacturing Default: Off.

SOFTWARE UTILITIES

CHAPTER

3

This chapter comprises the detailed information of VGA driver, LAN driver, Sound driver, and flash BIOS update. It also describes on how to install the watchdog timer.

Section includes:

- VGA Driver Utility
- Flash BIOS Update
- LAN Driver Utility
- SOUND Driver Utility
- Intel® Chipset Software Installation Utility
- USB2.0 Chipset Software Installation Utility
- SATA Software Installation Utility

3-1. INTRODUCTION

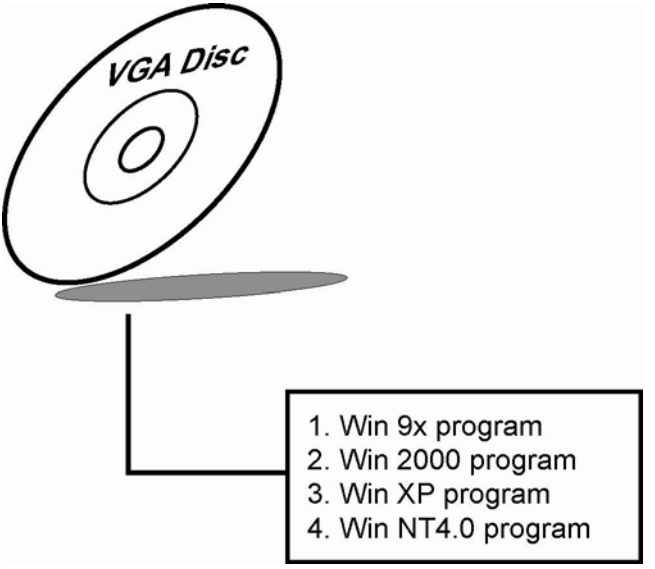
Enclosed with our BPC-8580 package, you will find a CD ROM disk containing all types of drivers we have. As a BPC-8580 user, you will only need the some of files contained in the CD ROM disk, please take note of the following chart :

File name (Assume that CD ROM drive is D:)	**Purpose**
D:\UTILITY\setup.exe	For Intel® Chipset Software Installation Utility Software Update 98SE/2K/NT/XP.
D:\VGA\	For Intel 855GME Driver installation
D:\LAN\	For Intel 82562ET Driver installation
D:\SOUND\	For Realtek ALC202A Driver installation
D:\USB2.0\	For USB 2.0 Driver installation
D:\SATA\	For SATA Driver installation
D:\Flash\Awdflash.exe	For BIOS update

User should remember to install the Utility right after the OS fully installed.

3-2. VGA DRIVER UTILITY

The VGA interface is embedded with our BPC-8580 system to support CRT display. The following illustration briefly shows you the content of VGA driver in D:\VGA\:



3-2-1. Installation of VGA Driver

(1) Start the computer (Win 2000/XP).
(2) Insert the Utility Disk into the CD ROM drive or drive A/B.
(3) Double-click "D:\VGA\WIN9X\SETUP.EXE
(if D is not your CD ROM drive and substitute D with the right drive) in the text entry area and press OK.
(4) Click "Next" on the Welcome screen.
(5) Read the license agreement and click "Yes" to continue.
(6) The driver files will now be installed. When finished, choose the "Yes" to reboot option, and click "Finished" to restart your computer. The driver should now be loaded.

⌛ For more information on VGA driver installation, please refer to the readme.txt found on the sub-directory of the VGA driver utility.

3-3. FLASH BIOS UPDATE

3-3-1. System BIOS Update:

Users of BPC-8580 can use the program “Awdflash.exe” contained in the Utility Disk for system BIOS update.

1. Install “Awdflash.exe” from Utility Disk to Drive D.
2. Insert the BIOS file you have obtained from the vendor.
   Type the path to Awdflash.exe and execute the BIOS update with file 8580xxxx.bin
3. D:\AWDFLASH>AWDFLASH 8580xxxx.bin
4. The screen will display as the table fount on the next page:

FLASH MEMORY WRITER v7.XX (C) Award Software 2001 All Rights Reserved
Flash Type – SST 49LF004A /3.3V File Name to Program: 8580xxxx.bin Checksum: XXXXX
Error Message: Do You Want To Save BIOS (Y/N)

If you want to save up the original BIOS, enter "Y" and press < Enter >. If you choose "N", the following table will appear on screen.

FLASH MEMORY WRITER v7.XX (C) Award Software 2001 All Rights Reserved
Flash Type – SST 49LF004A /3.3V File Name to Program: 8580xxxx.bin Checksum: XXXXX
Error Message : Are You Sure To Program (Y/N)

Select "Y", and the BIOS will be renewed. When you are refreshing the BIOS, do not turn off or reset the system, or you will damage the BIOS. After you have completed all the programming, the screen displays the table below:

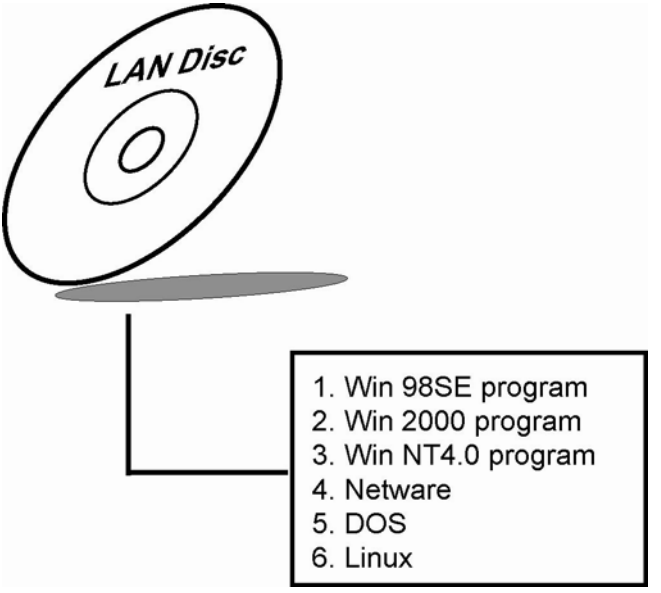
FLASH MEMORY WRITER v7.XX (C) Award Software 2001 All Rights Reserved
Flash Type – SST 49LF004A /3.3V File Name to Program: 8580xxxx.bin Checksum: XXXXX Reset System or Power off to accomplish update process!
F1: Reset F10: Exit

Please reset or power off the system, and then the Flash BIOS is fully implemented.

3-4. LAN DRIVER UTILITY

3-4-1. Introduction

The BPC-8580 Mainboard is enhanced with LAN function that can support various network adapters. The content of the LAN driver is found as follows :

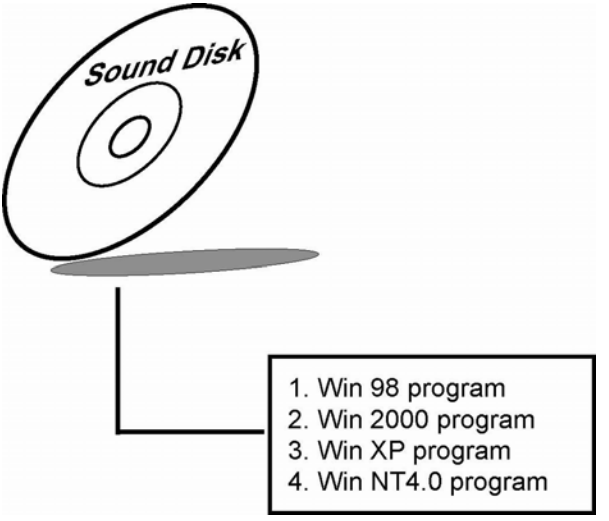


For more details on Installation procedure, please refer to Readme.txt file found on LAN DRIVER UTILITY.

3-5. SOUND DRIVER UTILITY

3-5-1. Introduction

The ALC202A sound function enhanced in this system is fully compatible with Windows 98, Windows NT 4.0, Windows 2000 and Windows XP. Below, you will find the content of the Sound driver :



3-5-2. Installation Procedure for Windows2000/XP

(1) From the task bar, click on Start, and then Run.
(2) In the Run dialog box, type D:\Driver\Sound\path\setup, where "D:\Driver\Sound\path" refers to the full path to the source files.
(3) Click on the OK button or press the ENTER key.
(4) Click on the "Next" and OK prompts as they appear.
(5) Reboot the system to complete the driver installation.

3-6. USB2.0 SOFTWARE INSTALLATION UTILITY

3-6-1. Installation of Utility for Windows 98SE/ 2000/XP

Intel USB 2.0 Enhanced Host Controller driver can only be used on Windows 98SE, Windows 2000 and Windows XP on Intel Desktop boards. It should be installed right after the OS installation, kindly follow the following steps:

1. Place insert the Utility Disk into Floppy Disk Drive A/B or CD ROM drive.
2. Under Windows 98SE, 2000, and XP system, go to the directory where Utility Disc is located.
3. Start the "System" wizard in control panel. (Click Start/Settings/Control Panel).
4. Select "Hardware" and click "Device Manager " button.
5. Double Click "USB Root Hub".
6. Select "Driver".
7. Click "Install" to install the driver.
8. Follow the instructions on the screen to complete the installation.
9. Click "Finish" after the driver installation is complete.

3-7. SATA SOFTWARE INSTALLATION UTILITY

3-7-1 Installation of Utility for Windows 98SE/ 2000/ XP

Silicon Image SATA Sil3512 Controller driver can only be used on Windows 98SE, Windows 2000 and Windows XP on Intel Desktop boards. It should be installed right after the OS installation, kindly follow the following steps:

1. Please insert the Utility Disk into Floppy Disk Drive A/B or CD ROM drive.
2. Under Windows 98SE, 2000, and XP system, go to the directory where Utility Disc is located.
3. Start the "System" wizard in control panel. (Click Start/Settings/Control Panel).
4. Select "Hardware" and click "Device Manager" button.
5. Double Click "RAID Controller".
6. Select "Driver".
7. Click "Si3112r" to install the driver.
8. Follow the instructions on the screen to complete the installation.
9. Click "Finish" after the driver installation is complete.

AWARD BIOS SETUP

CHAPTER 4

This chapter shows how to set up the Award BIOS.

Section includes:

- Introduction
- Entering Setup
- The Standard CMOS Features
- The Advanced BIOS Features
- The Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PNP/PCI Configuration
- PC Health Status
- Frequency Control
- Load Fail-Safe Defaults
- Load Optimized Defaults
- Password Setting
- Save and Exit Setup
- Exit Without Saving

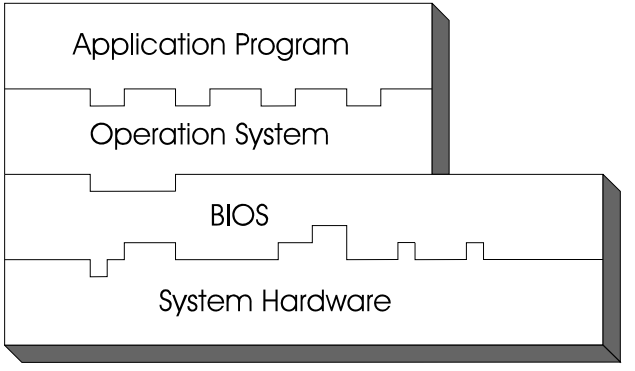
4-1. INTRODUCTION

This chapter will show you the function of the BIOS in managing the features of your system. The BPC-8580 Socket 478 Pentium M Book Size PC is equipped with the BIOS for system chipset from Award Software Inc. This page briefly explains the function of the BIOS in managing the special features of your system. The following pages describe how to use the BIOS for system chipset Setup menu.

Your application programs (such as word processing, spreadsheets, and games) rely on an operating system such as DOS or OS/2 to manage such things as keyboard, monitor, disk drives, and memory.

The operating system relies on the BIOS (Basic Input and Output system), a program stored on a ROM (Read-only Memory) chip, to initialize and configure your computer's hardware. As the interface between the hardware and the operating system, the BIOS enables you to make basic changes to your system's hardware without having to write a new operating system.

The following diagram illustrates the interlocking relationships between the system hardware, BIOS, operating system, and application program:



4-2. ENTERING SETUP

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines and the following message will appear on the lower screen:

PRESS <DEL> TO ENTER SETUP, ESC TO SKIP MEMORY TEST

As long as this message is present on the screen you may press the <Del> key (the one that shares the decimal point at the bottom of the number keypad) to access the Setup program. In a moment, the main menu of the Award SETUP program will appear on the screen:

Phoenix - AwardBIOS CMOS Setup Utility

►Standard CMOS Features	►Frequency Control
►Advanced BIOS Features	Load Fail-Safe Defaults
►Advanced Chipset Features	Load Optimized Defaults
►Integrated Peripherals	Set Supervisor Password
►Power Management Setup	Set User Password
►PnP/PCI Configurations	Save & Exit Setup
►PC Health Status	Exit Without Saving
Esc : Quit F10 : Save & Exit Setup	↑↓→← : Select Item
Time, Date, Hard Disk Type ….	

Setup program initial screen

You may use the cursor the up/down keys to highlight the individual menu items. As you highlight each item, a brief description of the highlighted selection will appear at the bottom of the screen.

4-3. THE STANDARD CMOS FEATURES

Highlight the "STANDARD CMOS FEATURES" and press the <ENTER> key and the screen will display the following table:

Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features

Date (mm:dd:yy)	Wed, Feb 23 2005	Item Help
Time (hh:mm:ss)	9 : 32 : 52	Menu Level ►
► IDE Primary Master	[None]	
► IDE Primary Slave	[None]	Change the day, month, year and century
► IDE Secondary Master	[None]	
► IDE Secondary Slave	[None]	
Drive A	[1.44M, 3.5 in.]	
Drive B	[None]	
Video	[EGA/VGA]	
Halt On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	1013760K	
Total Memory	1014784K	

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

CMOS Setup screen

In the above Setup Menu, use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

Date:

< Month >, < Date > and <Year >. Ranges for each value are in the CMOS Setup Screen, and the week-day will skip automatically.

Time:

< Hour >, < Minute >, and < Second >. Use 24 hour clock format, i.e., for PM numbers, add 12 to the hour. For example: 4: 30 P.M. You should enter the time as 16:30:00.

IDE Primary Master / Slave:
IDE Secondary Master / Slave:

The BIOS can automatically detect the specifications and optimal operating mode of almost all IDE hard drives. When you select type AUTO for a hard drive, the BIOS detect its specifications during POST, every time system boots.

If you do not want to select drive type AUTO, other methods of selecting drive type are available:

1. Match the specifications of your installed IDE hard drive(s) with the preprogrammed values for hard drive types 1 through 45.
2. Select USER and enter values into each drive parameter field.
3. Use the IDE HDD AUTO DETECTION function in Setup.

Here is a brief explanation of drive specifications:

Type: The BIOS contains a table of pre-defined drive types. Each defined drive type has a specified number of cylinders, number of heads, write precompensation factor, landing zone, and number of sectors. Drives whose specifications do not accommodate any predefine type are classified as type USER.

- Size: Disk drive capacity (approximate). Note that this size is usually greater than the size of a formatted disk given by a disk-checking program.
- Cyls: number of cylinders.
- Head: number of heads.
- Precomp: write precompensation cylinders.
- Landz: landing zone.
- Sector: number of sectors.
- Mode: Auto, Normal, Large or LBA.

  Auto: The BIOS automatically determines the optimal mode.

  - Normal: Maximum number of cylinders, heads, sectors supported are 1024, 16 and 63.
  - Large: For drives that do not support LBA and have more than 1024 cylinders.

- LBA (Logical Block Addressing): During drive accesses, the IDE controller transforms the data address described by sector, head and cylinder number into a physical block address, significantly improving data transfer rates. For drives greater than 1024 cylinders.

DRIVE A AND DRIVE B:

Select the type of floppy disk drive installed in your system. The available options are 360KB 5.25in, 1.2KB 5.25in, 720KB 3.5in, 1.44MB 3.5in, 2.88MB 3.5in and None.

VIDEO:

This category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup. Available Options are as follows:

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SEGA, SVGA or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode.
CGA 80	Color Graphics Adapter, power up in 80 column mode.
MONO	Monochrome adapter, includes high resolution monochrome adapters.

HALT ON:

This category allows user to choose whether the computer will stop if an error is detected during power up. Available options are “All errors”, “No errors”, “All, But keyboard”, “All, But Diskette”, and “All But Disk/Key”.

BASE MEMORY:

Displays the amount of conventional memory detected during boot up.

EXTENDED MEMORY:

Displays the amount of extended memory detected during boot up.

TOTAL MEMORY:

Displays the total memory available in the system.

HARD DISK ATTRIBUTES:

Type	Cylinders	Heads	V-P comp	LZone	Sect	Capacity
1	306	4	128	305	17	10
2	615	4	300	615	17	20
3	615	6	300	615	17	30
4	940	8	512	940	17	62
5	940	6	512	940	17	46
6	615	4	65535	615	17	20
7	642	8	256	511	17	30
8	733	5	65535	733	17	30
9	900	15	65535	901	17	112
10	820	3	65535	820	17	20
11	855	5	65535	855	17	35
12	855	7	65535	855	17	49
13	306	8	128	319	17	20
14	733	7	65535	733	17	42
15	000	0	0000	000	00	00
16	612	4	0000	663	17	20
17	977	5	300	977	17	40
18	977	7	65535	977	17	56
19	1024	7	512	1023	17	59
20	733	5	300	732	17	30
21	733	7	300	732	17	42
22	733	5	300	733	17	30
23	306	4	0000	336	17	10
24	977	5	65535	976	17	40
25	1024	9	65535	1023	17	76
26	1224	7	65535	1223	17	71
27	1224	11	65535	1223	17	111
28	1224	15	65535	1223	17	152
29	1024	8	65535	1023	17	68
30	1024	11	65535	1023	17	93
31	918	11	65535	1023	17	83
32	925	9	65535	926	17	69
33	1024	10	65535	1023	17	85
34	1024	12	65535	1023	17	102
35	1024	13	65535	1023	17	110
36	1024	14	65535	1023	17	119
37	1024	2	65535	1023	17	17
38	1024	16	65535	1023	17	136
39	918	15	65535	1023	17	114
40	820	6	65535	820	17	40
41	1024	5	65535	1023	17	42
42	1024	5	65535	1023	26	65
43	809	6	65535	852	17	40
44	809	6	65535	852	26	61
45	776	8	65335	775	33	100
47			AUTO			

Award Hard Disk Type Table

4-4. THE ADVANCED BIOS FEATURES

Choose the "ADVANCED BIOS FEATURES" in the main menu, the screen shown as below.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

Virus Warning	[Enabled]	Item Help
CPU L1 & L2 Cache	[Enabled]	
CPU L3 Cache	[Enabled]	
Quick Power On Self Test	[Enabled]	Menu Level ►
First Boot Device	[Floppy]	
Second Boot Device	[HDD-0]	
Boot Up Floppy Seek	[Enabled]	
Boot Up NumLock Status	[On]	
Typematic Rate Setting	[Disabled]	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	[Setup]	

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

BIOS Features Setup Screen

The "BIOS FEATURES SETUP" allow you to configure your system for basic operation. The user can select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

A brief introduction of each setting is given below.

Virus Warning:

Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area , BIOS will show a warning message on screen and alarm beep.

CPU L1 & L2 CACHE:

This item allows you to enable L1 & L2 cache.

QUICK POWER ON SELF-TEST:

This item allows you to speed up Power On Self Test (POST) after power-up the computer. When enabled, the BIOS will shorten or skip some check items during POST.

FIRST/SECOND/BOOT DEVICE:

The BIOS attempt to load the operating system from the devices in the sequence selected in these items.

BOOT UP FLOPPY SEEK:

You may enable / disable this item to define whether the system will look for a floppy disk drive to boot at power-on, or proceed directly to the hard disk drive.

BOOT UP NUMLOCK STATUS:

Select power on state for NumLock.

TYPEMATIC RATE SETTING:

Enable this item if you wish to be able to configure the characteristics of your keyboard. Typematic refers to the way in which characters are entered repeatedly if a key is held down. For example, if you press and hold down the "A" key, the letter "a" will repeatedly appear on your screen on your screen until you release the key. When enabled, the typematic rate and typematic delay can be selected.

TYPEMATIC RATE (CHARS/SEC):

This item sets the number of times a second to repeat a key stroke when you hold the key down.

TYPEMATIC DELAY (MSEC):

The item sets the delay time after the key is held down before it begins to repeat the keystroke.

SECURITY OPTION:

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

🔔 To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

4-5. ADVANCED CHIPSET FEATURES

Choose the "ADVANCED CHIPSET FEATURES" from the main menu, the screen shown as below.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features

DRAM Timing Selectable	[By SPD]	Item Help
X CAS Latency Time	[2.5]	
Active to Precharge Delay	[7]	
X DRAM RAS# to CAS# Delay	[3]	Menu Level ►
X DRAM RAS# Precharge	[3]	
DRAM Data Integrity Mode	[Non-ECC]	
System BIOS Cacheable	[Enabled]	
Video BIOS Cacheable	[Disabled]	
Memory Hole At 15M-16M	[Enabled]	
Delayed Transaction	[Enabled]	
AGP Aperture Size (MB)	[64]	
** VGA Setting **		
On-Chip VGA	[Enabled]	
On-Chip Frame Buffer Size	[32MB]	
Boot Display	[CRT]	
PCI SERR# NMI	[Disabled]	

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

Chipset Features Setup Screen

This parameter allows you to configure the system based on the specific features of the installed chipset. The chipset manages bus speed and access to system memory resources, such as DRAM and the external cache.

It also coordinates communications between conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for the system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

DRAM TIMEING SELECTABLE:

The value in this field depends on performance parameters of the installed memory chips (DRAM). Do not change the value from the factory setting unless you install new memory that has a different performance rating than the original DRAMs.

CAS LATENCY TIME:

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

DRAM RAS# TO CAS# DELAY:

This item let you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The choices are 2 and 3.

DRAM RAS# PRECHARGE TIME:

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The choices are 2 & 3.

SYSTEM BIOS CACHEABLE:

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

VIDEO BIOS CACHEABLE:

Select Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

On-Chip VGA

To Enable/Disable the onboard display chip.

Boot Display

To select the boot-up display type.

PCI SERR# NMI

To Enable/Disable the PCI SERR# interrupt

4-6. INTEGRATED PERIPHERALS

Choose "INTEGRATED PERIPHERALS" from the main setup menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

▶ OnChip IDE Device	[Press Enter]	Item Help
▶ Onboard Device	[Press Enter]	
▶ SuperIO Device	[Press Enter]	Menu Level ▶
Onboard Serial Port 3	[3E8/IRQ10]	
Onboard Serial Port 4	[2E8/IRQ11]	
WatchDog Support	[Disabled]	

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

Integrated Peripherals Setup Screen

By moving the cursor to the desired selection and by pressing the <F1> key, the all options for the desired selection will be displayed for choice.

If bios setup menu item supports USB device boot, it will cause Win9x detects the same storages twice when the system is rebooted, and USB HDD will fail. Note: this cause just happen under Win9x, the phenomenon is a limitation.

VIA ONCHIP IDE DEVICE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
OnChip IDE Device

OnChip Primary PCI IDE	[Enabled]	Item Help
IDE Primary Master PIO	[Auto]	
IDE Primary Slave PIO	[Auto]	
IDE Primary Master UDMA	[Auto]	Menu Level ►
IDE Primary Slave UDMA	[Auto]	
OnChip Secondary PCI IDE	[Enabled]	
IDE Secondary Master PIO	[Auto]	
IDE Secondary Slave PIO	[Auto]	
IDE Secondary Master UDMA	[Auto]	
IDE Secondary Slave UDMA	[Auto]	
IDE HDD Block Mode	[Enabled]	

↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Descriptions on each item above are as follows:

1. **OnChip Primary PCI IDE**
   The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

2. **Primary Master/Slave PIO**
   Secondary Master/Slave PIO
   The four IDE PIO fields allow you to set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.
3. **Primary Master/Slave UDMA**
   Secondary Master/Slave UDMA
   Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If you

hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

4. **IDE HDD Block Mode:**
   Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

ONBOARD DEVICE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
Onboard Device

USB Controller	[Enabled]	Item Help
USB 2.0 Controller	[Enabled]	
USB Keyboard Support	[Disabled]	
USB Mouse Support	[Disabled]	Menu Level ►
AC97 Audio	[Auto]	
Onboard LAN	[Enabled]	
PCI Option ROM Support	[Enabled]	
Init Display First	[Onboard/AGP]	
↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Descriptions on each item above are as follows:

1. **USB Controller**
   This should be enabled if your system has a USB installed on the system board and you want to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.
2. **USB Keyboard Support**
   Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.
3. **USB Mouse Support**
   Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB Mouse.
4. **AC97 Audio:**
   This item allows you to enable/disable to support AC97 Audio.

5. **PCI Option ROM Support**
   To Enabled/Disable the LAN PXE ROM
6. **Init Display First**
   Select the initial Display type

SUPER IO DEVICE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
SuperIO Device

Onboard FDC Controller	[Enabled]	Item Help
Onboard Serial Port 1	[3F8/IRQ4]	
Onboard Serial Port 2	[2F8/IRQ3]	
UART Mode Select	[Normal]	Menu Level ►
TxD, RxD Polarity Active	[Lo, Hi]	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[SPP]	
ECP Mode Use DMA	[3]	

↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Descriptions on each item above are as follows:

1. **Onboard FDC Controller**
   Select Enabled if the system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled.
2. **Onboard Serial Port 1/2**
   Select an address and corresponding interrupt for the first and second serial ports.
3. **UART Mode Select**
   This item allows you to select UART mode.

4. **Onboard Parallel Port**
   This item allows you to determine access onboard parallel port controller with which I/O address.
5. **Parallel Port Mode**
   Select an operating mode for the onboard parallel (printer) port. Select *Normal, Compatible,* or *SPP* unless you are certain your

hardware and software both support one of the other available modes.

6. ECP Mode Use DMA

Select a DMA channel for the parallel port for use during ECP mode.

ONBOARD SERIAL PORT 3:

ONBOARD SERIAL PORT 4:

Select a logical COM port name and matching address for the third and forth serial ports. Select an address and corresponding interrupt for third and forth serial port.

4-7. POWER MANAGEMENT SETUP

Choose "POWER MANAGEMENT SETUP" option on the main menu, a display will be shown on screen as below :

Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup

ACPI Function	[Enabled]	Item Help
Power Management	[User Define]	
Video Off Method	[DPMS]	
Video Off In Suspend	[Yes]	
MODEM Use IRQ	[3]	
Suspend Mode	[Disabled]	
		Menu Level ►
Soft-Off by PWR-BTTN	[Instant-Off]	
PWRON After PWR-Fail	[Off]	
Wake on LAN	[Enabled]	
Power On by Ring	[Disabled]	
Resume by Alarm	[Disabled]	
x Date (of Month) Alarm	0	
x Time (hh:mm:ss) Alarm	0 : 0 : 0	
** Reload Global Timer Events **		
FDD,COM,LPT Port	[Disabled]	
PCI PIRQ[A-D]#	[Disabled]	

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

Power Management Setup Screen

The "Power Management Setup" allows the user to configure the system to the most effectively save energy while operating in a manner consistent with your own style of computer use.

ACPI FUNCTION:

Users are allowed to enable or disable the Advanced Configuration and Power Management (ACPI).

POWER MANAGEMENT:

This item allows you to select the Power Management mode.

SOFT-OFF BY PWR-BTTN:

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung". The choices are Delay 4 Sec and Instant-Off.

PWRON After PWR-Fail:

This item allows you to select if you want to power on the system after power failure. The choice: Off, On, Former-Sts.

WAKE ON LAN:

An input signal from PME on the PCI card awakens the system from a soft off state.

RESUME BY ALARM:

When *Enabled,* your can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

4-8. PNP/PCI CONFIGURATION

Choose "PNP/PCI CONFIGURATION" from the main menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations

Reset Configuration Data	[Disabled]	Item Help
Resources Controlled By	[Auto (ESCD)]	Menu Level ►
x IRQ Resources	Press Enter	
PCI/VGA Palette Snoop	[Disabled]	Select Yes if you are using a Plug and Play capable operating system Select No if you need the BIOS to configure non-boot devices
↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults		

PNP/PCI Configuration Setup Screen

The PNP/PCI Configuration Setup describes how to configure PCI bus system. PCI, also known as Personal Computer Interconnect, is a system, which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components.

This section covers technical items, which is strongly recommended for experienced users only.

RESET CONFIGURATION DATA:

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system configuration has caused such a serious conflict that the operating system cannot boot.

RESOURCE CONTROLLED BY:

The Award Plug and Play Bios can automatically configure all of the booth and Plug and Play-compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows 95. By choosing "manual", you are allowed to configure the *IRQ Resources and DMA Resources*.

IRQ RESOURCES:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
IRQ Resources

IRQ-3 assigned to	[PCI Device]	Item Help
IRQ-4 assigned to	[PCI Device]	
IRQ-5 assigned to	[PCI Device]	
IRQ-7 assigned to	[PCI Device]	Menu Level ►
IRQ-9 assigned to	[PCI Device]	
IRQ-10 assigned to	[PCI Device]	Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture
IRQ-11 assigned to	[PCI Device]	
IRQ-12 assigned to	[PCI Device]	
IRQ-14 assigned to	[PCI Device]	
IRQ-15 assigned to	[PCI Device]	
↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Descriptions on each item above are as follows:

IRQ-n Assigned to:

You may assign each system interrupt a type, depending on the type of device using the interrupt.

4-9. PC HEALTH STATUS

Choose "PC HEALTH STATUS" from the main menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

Shutdown Temperature	[Disabled]	Item Help
		Menu Level ►
Current CPU Temperature		
+2.5V		
VCore		
VCC		
VBAT		
5 V		
12 V		
Fan1 Speed		
Fan2 Speed		
CPU Fan Start Temperature	[30 °C]	
CPU Fan Temperature Range	[5 °C]	

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

PC Health Status Setup Screen

The PC Health Status Setup allows you to select whether to choose between monitoring or to ignore the hardware monitoring function of your system.

SHUTDOWN TEMPERATURE:

This item allows you to set up the CPU shutdown Temperature. This function is only effective under Windows 98 ACPI mode.

CURRENT CPU TEMPERATURE:

This item shows you the current CPU temperature.

CURRENT SYSTEM FAN SPEED:

This item shows you the current System FAN speed.

+2.5/Vcore/Vcc/VBAT/5V/12V

Show you the voltage of +2.5/Vcore/Vcc/VBAT/5V/12V

CPU Fan Start Temperature

To Set Fan control starting Temperature.

CPU Fan Temperature Range

To select the temperature range of FAN low speed to the high speed.

4-10. FREQUENCY CONTROL

Choose "FREQUENCY CONTROL" from the main menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
Frequency Control

Auto Detect PCI Clk	[Enabled]	Item Help
Spread Spectrum	[Enabled]	Menu Level ►

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults

Frequency Control Setup Screen

This setup menu allows you to specify your settings for frequency control.

AUTO DETECT PCI CLK:

This item allows you to enable or disable auto detect PCI Clock.

SPREAD SPECTRUM:

When the system clock generator pulses, the extreme values of the pulse generate excess EMI. Enabling pulse spectrum spread modulation changes the extreme values from spikes to flat curves, thus reducing EMI. This benefit may in some cases be outweighed by problems with timing-critical devices such as a clock-sensitive SCSI device.

4-11. LOAD FAIL-SAFE DEFAULTS

By pressing the <ENTER> key on this item, you get a confirmation dialog box with a message similar to the following:

To use the BIOS default values, change the prompt to "Y" and press the <Enter > key. CMOS is loaded automatically when you power up the system.

4-12. LOAD OPTIMIZED DEFAULTS

When you press <Enter> on this category, you get a confirmation dialog box with a message similar to the following:

Pressing "Y" loads the default values that are factory setting for optimal performance system operations.

4-13. PASSWORD SETTING

User is allowed to set either supervisor or user password, or both of them. The difference is that the supervisor password can enter and change the options of the setup menus while the user password can enter only but do not have the authority to change the options of the setup menus.

TO SET A PASSWORD

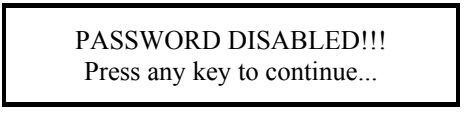
When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password up to eight characters in length, and press < Enter >. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press the < Enter > key. You may also press < Esc > to abort the selection and not enter a password.

🔔 User should bear in mind that when a password is set, you will be asked to enter the password everything you enter CMOS setup Menu.

TO DISABLE THE PASSWORD

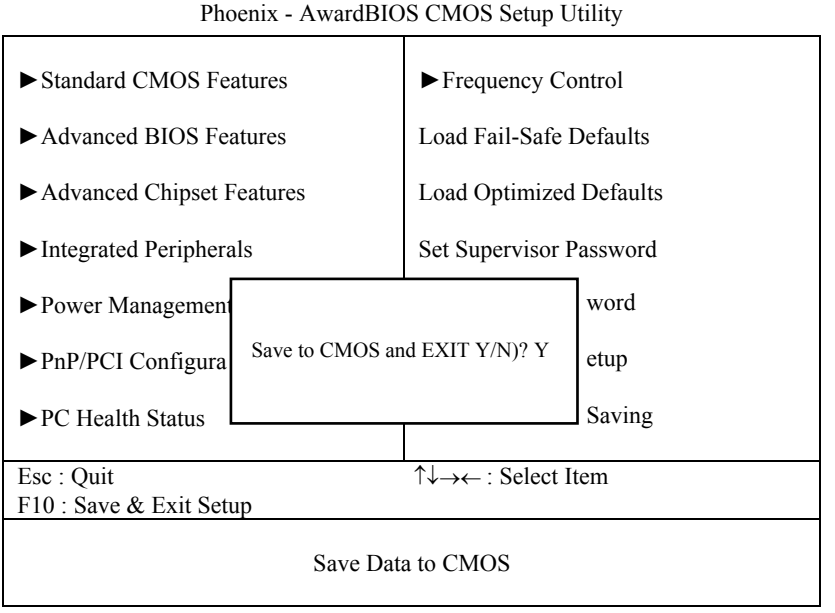
To disable the password, select this function (do not enter any key when you are prompt to enter a password), and press the <Enter> key and a message will appear at the center of the screen:



Press the < Enter > key again and the password will be disabled. Once the password is disabled, you can enter Setup freely.

4-14. SAVE & EXIT SETUP

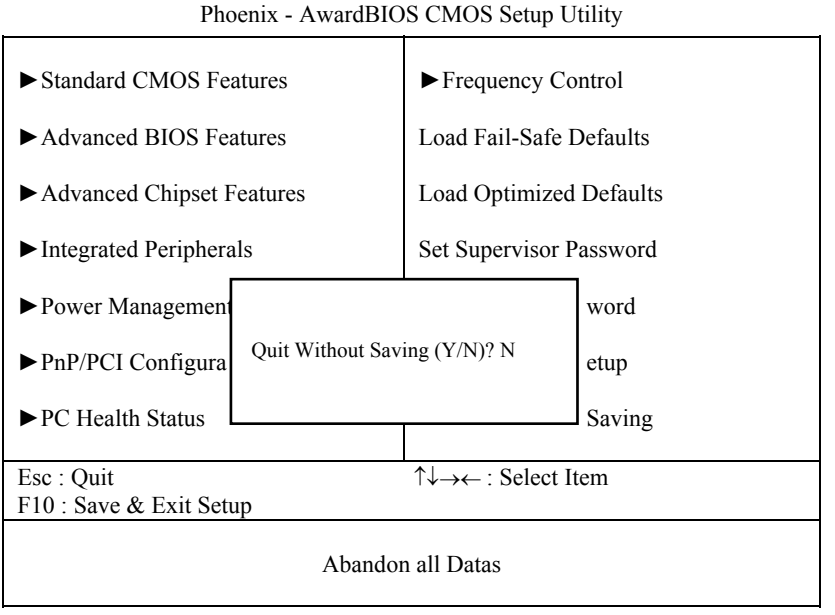
After you have completed adjusting all the settings as required, you must remember to save these setting into the CMOS RAM. To save the settings, select "SAVE & EXIT SETUP" and press <Enter>, a display will be shown as follows:



When you confirm that you wish to save the settings, your system will be automatically restarted and the changes you have made will be implemented. You may always call up the setup program at any time to adjust any of the individual items by pressing the <Del> key during boot up.

4-15. EXIT WITHOUT SAVING

If you wish to cancel any changes you have made, you may select the "EXIT WITHOUT SAVING" and the original setting stored in the CMOS will be retained. The screen will be shown as below:



SYSTEM ASSEMBLY

APPENDIX

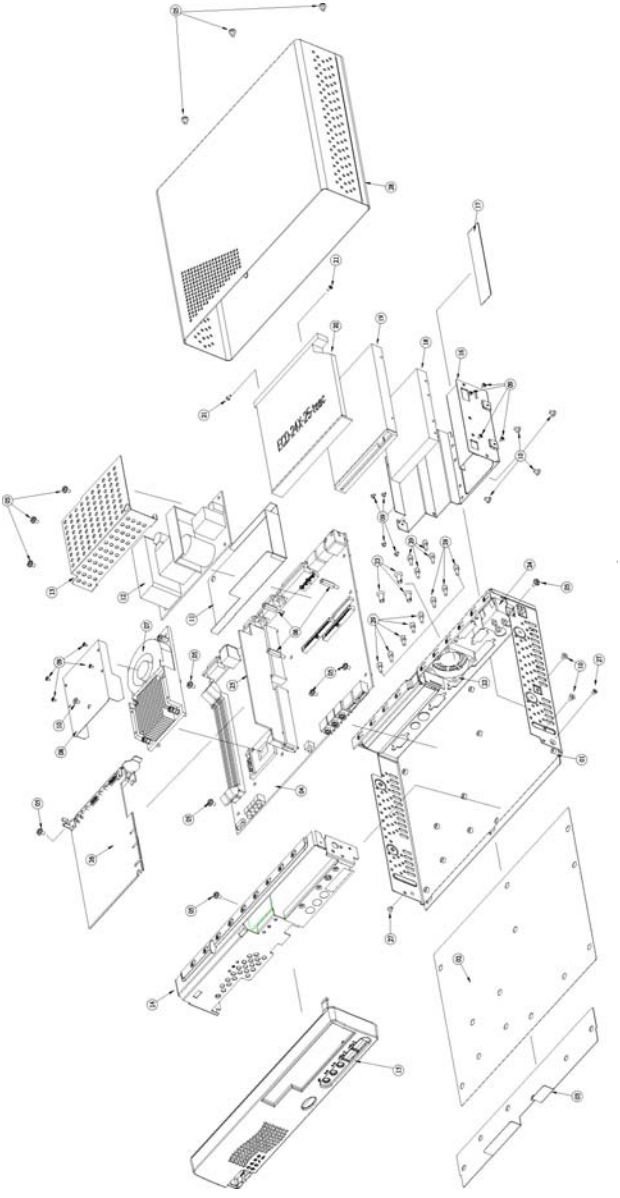
A

This appendix contain exploded diagram of the system.

Section includes:

- Exploded Diagram for Whole System Unit

EXPLODED DIAGRAM FOR WHOLE SYSTEM UNIT



Item	Part No.	Description	Q'ty
01	32-015-03800201	PS-8580 SUB CHASSIS	01
02	30-056-02200038	PS-8580 MYLAR FOR MAIN BOARD	01
03	30-056-02400038	PS-8580 INSULATOR 0.35MM FOR MB/FB	01
04	M/B	M/B	01
05	22-252-30004011	Screws	13
06	QSTUD-A	Pillar 3x15x6(W/NUT3x6)	03
07	21-002-16319001	PS-8580 CPU HEATSINK MODULE	01
08	30-056-02300038	PS-8580 MYLAR FOR HEATSINK	01
09	22-272-20002011	Screws (M2x0.4px2.5L)	12
10	QSTUD-I	Screws (M3xP0.5x4L)	07
11	HML-126-79.5-0.25	MYLAR(149x120x0.25mm)	01
12	POWER	POWER	01
13	30-056-02100038	PS-8580 MYLAR FOR POWER	01
14	32-006-03800101	PS-8580 SUB FRONT BRACKET	01
15	31-003-03800101	PS-8580 SUB FRONT PANEL FOR CD ROM FDD(W)	01
16	EC-8380-HPC-BAY	PS8380 CDROM/HDD/FDD Holder	01

Item	Part No.	Description	Q'ty
17	HML-106-23-0.5	PS-8380 MYLAR for CDROM	01
18	2.5"HDD	2.5"HDD	01
19	FDD	FDD	01
20	CD-ROM	CD-ROM	01
21	QSTUD-L	Screws (M2x0.4px6L)	02
22	21-004-04040012	ADDA Fan 40X40X10mm 4200rpm (AD0412LB-G73)	01
23	22-122-40080011	Screws 4x8mm	03
24	W8380-AC	AC CABLE (100-S1160)	01
25	RISER CARD	RISER CARD	01
26	Expansion Card	Expansion card	01
27	AWC-QSTUD-3-0.5-4	Screws (M3x0.5x4L)	02
28	SA-8380-TC-LO-W	Cover (White) (EC-8380-TC-W)*1+(EC-8380-LO)*1	01
29	22-692-40048051	CU_BOSS Pillar (UNF NO4x4.8X11.8mm)	12
30			
31			

TECHNICAL SUMMARY

APPENDIX

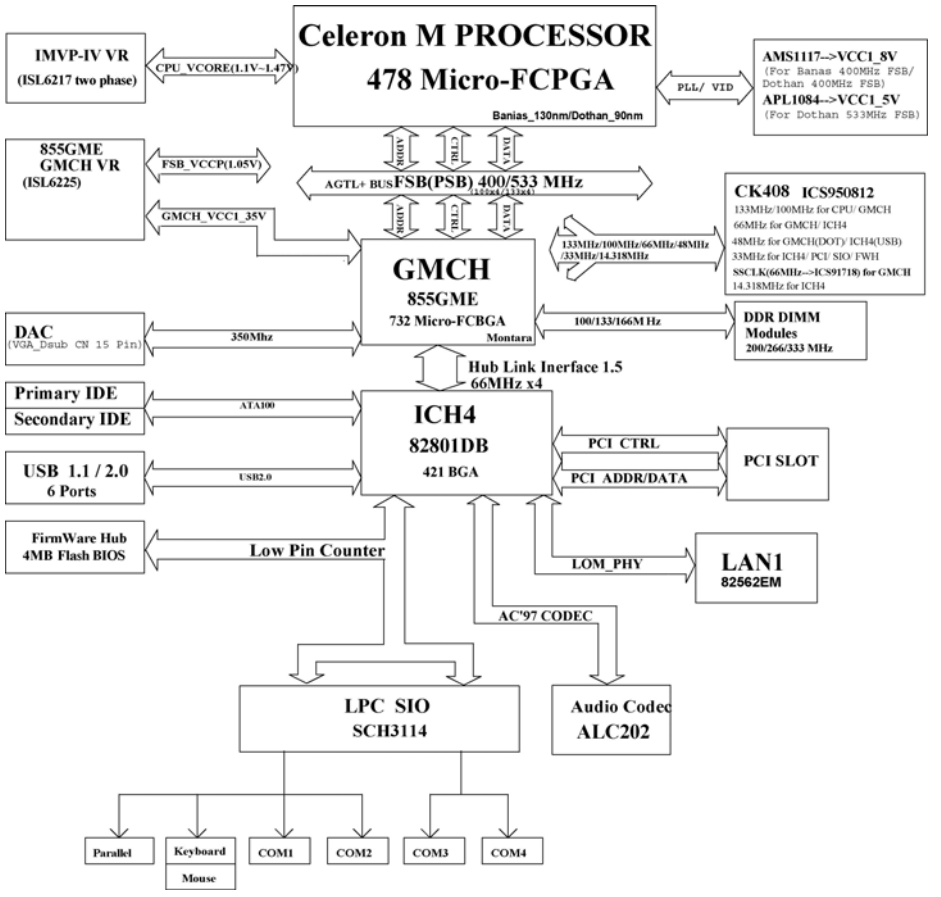
B

This section introduce you the maps concisely.

Section includes:

- Block Diagram
- Interrupt Map
- RTC (Standard) RAM Bank
- Timer & DMA Channels Map
- I / O & Memory Map

BLOCK DIAGRAM



INTERRUPT MAP

IRQ	ASSIGNMENT
0	System TIMER interrupt from TIMER-0
1	Keyboard output buffer full
2	Cascade for IRQ 8-15
3	Serial port 2
4	Serial port 1
5	Parallel Port 2
6	Floppy Disk adapter
7	Parallel port 1
8	RTC clock
9	Available
10	Serial 3
11	Serial 4
12	PS/2 Mouse
13	Math coprocessor
14	IDE Controller
15	IDE Controller

RTC (STANDARD) RAM BANK

CODE	ASSIGNMENT
00h	Seconds
01h	Second alarm
02h	Minutes
03h	Minutes alarm
04h	Hours
05h	Hours alarm
06h	Day of week
07h	Day of month
08h	Month
09h	Year
0Ah	Status register A
0Bh	Status register B
0Ch	Status register C
0Dh	Status register D
0Eh-7Fh	114 Bytes of User RAM

TIMER & DMA CHANNELS MAP

Timer Channel Map :

Timer Channel	Assignment
0	System timer interrupt
1	DRAM Refresh request
2	Speaker tone generator

DMA Channel Map :

DMA Channel	Assignment
0	Available
1	Available / Parallel
2	Floppy Disk adapter
3	Available / Parallel
4	Cascade for DMA controller 1
5	Available
6	Available
7	Available

I/O & MEMORY MAP

Fixed I/O Ranges Decoded by ICH2 :

I/O Address	Read Target	Write Target	Internal Unit
00h-08h	DMA Controller	DMA Controller	DMA
09h-0Eh	Reserved	DMA Controller	DMA
0Fh	DMA Controller	DMA Controller	DMA
10h-18h	DMA Controller	DMA Controller	DMA
19h-1Eh	Reserved	DMA Controller	DMA
1Fh	DMA Controller	DMA Controller	DMA
20h-21h	Interrupt Controller	Interrupt Controller	Interrupt
24h-25h	Interrupt Controller	Interrupt Controller	Interrupt
28h-29h	Interrupt Controller	Interrupt Controller	Interrupt
2Ch-2Dh	Interrupt Controller	Interrupt Controller	Interrupt
2Eh-2Fh	LPC SIO	LPC SIO	Forwarder to LPC
30h-31h	Interrupt Controller	Interrupt Controller	Interrupt
34h-35h	Interrupt Controller	Interrupt Controller	Interrupt
38h-39h	Interrupt Controller	Interrupt Controller	Interrupt
3Ch-3Dh	Interrupt Controller	Interrupt Controller	Interrupt
40h-42h	Timer/Counter	Timer/Counter	PIT (8254)
43h	Reserved	Timer/Counter	PIT
4E-4F	LPC SIO	LPC SIO	Forwarder to LPC
50h-52h	Timer/Counter	Timer/Counter	PIT
53h	Reserved	Timer/Counter	PIT
60h	Microcontroller	Microcontroller	Forwarder to LPC
61h	NMI Controller	NMI Controller	Processor I/F
62h	Microcontroller	Microcontroller	Forwarder to LPC
63h	NMI Controller	NMI Controller	Processor I/F
64h	Microcontroller	Microcontroller	Forwarder to LPC
65h	NMI Controller	NMI Controller	Processor I/F
66h	Microcontroller	Microcontroller	Forwarder to LPC
67h	NMI Controller	NMI Controller	Processor I/F
70h	Reserved[5]	NMI & RTC controller	RTC
71h	RTC Controller	RTC Controller	RTC
72h	RTC Controller	NMI & RTC controller	RTC
73h	RTC Controller	RTC Controller	RTC
74h	RTC Controller	NMI & RTC controller	RTC
75h	RTC Controller	RTC Controller	RTC
76h	RTC Controller	NMI & RTC controller	RTC
77h	RTC Controller	RTC Controller	RTC

I/O Address	Read Target	Write Target	Internal Unit
80h	DMA Controller	DMA controller & LPC/PCI	DMA
81h-83h	DMA Controller	DMA Controller	DMA
84h-86h	DMA Controller	DMA Controller & LPC or PCI	DMA
87h	DMA Controller	DMA Controller	DMA
88h	DMA Controller	DMA Controller & LPC or PCI	DMA
89h-8Bh	DMA Controller	DMA Controller	DMA
8Ch-8Eh	DMA Controller	DMA Controller & LPC or PCI	DMA
08Fh	DMA Controller	DMA Controller	DMA
90h-91h	DMA Controller	DMA Controller	DMA
92h	Reset Generator	Reset Generator	Processor I/F
93h-9Fh	DMA Controller	DMA Controller	DMA
A0h-A1h	Interrupt Controller	Interrupt Controller	Interrupt
A4h-A5h	Interrupt Controller	Interrupt Controller	Interrupt
A8h-A9h	Interrupt Controller	Interrupt Controller	Interrupt
ACh-ADh	Interrupt Controller	Interrupt Controller	Interrupt
B0h-B1h	Interrupt Controller	Interrupt Controller	Interrupt
B2h-B3h	Power Management	Power Management	Power Management
B4h-B5h	Interrupt Controller	Interrupt Controller	Interrupt
B8h-B9h	Interrupt Controller	Interrupt Controller	Interrupt
BCh-BDh	Interrupt Controller	Interrupt Controller	Interrupt
C0h-D1h	DMA Controller	DMA Controller	DMA
D2h-DDh	Reserved	DMA Controller	DMA
DEh-DFh	DMA Controller	DMA Controller	DMA
F0h	See Note 3	FERR# /IGNNE#/ Interrupt Controller	Processor interface
170h-177h	IDE Controller[1]	IDE Controller[1]	Forwarded to IDE
1F0h-1F7h	IDE Controller[2]	IDE Controller[2]	Forwarded to IDE
376h	IDE Controller[1]	IDE Controller[1]	Forwarded to IDE
3F6h	IDE Controller[2]	IDE Controller[2]	Forwarded to IDE
4D0h-4D1h	Interrupt Controller	Interrupt Controller	Interrupt
CF9h	Reset Generator	Reset Generator	Processor interface

Notes:

1. Only if IDE Standard I/O space is enabled for Primary Drive. Otherwise, the target is PCI.
2. Only if IDE Standard I/O space is enabled for Secondary Drive. Otherwise, the target is PCI.
3. If POS_DEC_EN bit is enabled, reads from F0h will not be decoded by the ICH2. If POS_DEC_EN is not enabled, reads from F0h will forward to LPC.